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(54) PROVIDING/RECEIVING COMMUNICATION METHOD OF INTERNET ACCESS  
INFORMATION, ITS COMMUNICATION SYSTEM AND INFORMATION RECORDING  
MEDIUM

(57)Abstract:

PROBLEM TO BE SOLVED: To easily and promptly perform a work of initialization and alteration setting on a user terminal by automatically downloading information setting for connection with a provider through a communication network.

SOLUTION: The user terminal 12 selects a provider from picture display, inputs user information, creates data of information about the user terminal 12 and transfer the data to an Internet setting file generator 10 through a public telephone network 5. In such a case, the user information is arranged for the Internet setting and transferred to an ISP Web device 13 through a digital fixed communication network 1. The ISP Web device 13 generates a user account and a password, transfers them to the Internet setting file generator 10 through the digital fixed communication network 1 for providing access information, create a file for

Internet setting corresponding to user environment and transfers it to the user terminal 12 through the public telephone network 5. The user terminal 12 automatically downloads the file for Internet setting.

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**CLAIMS**

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[Claim(s)]

[Claim 1] Have a communication network under the environment of TCP/IP, and a communication network under a non-environment, and Internet connectivity information is set to offer and the approach of receiving. While a user side chooses the provider of arbitration from two or more providers by whom a screen display was done and inputs User Information The step which creates the data of \*\* user side information and is transmitted to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, The Internet configuration-file generation side arranges transmitted User Information to the Internet setup. The step transmitted to a provider side

through the communication network under the non-environment of TCP/IP, or an environment, The step which a provider side generates a user account and a password at least, and transmits to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, or an environment, The step which the Internet configuration-file generation side creates the file for the Internet setup corresponding to a user environment, and transmits to a user side through the communication network under the non-environment of TCP/IP, Offer and the receipt correspondence procedure of the Internet connectivity information characterized by a user side having the step which downloads the file for the Internet setup to a terminal automatically.

[Claim 2] While having a communication network under the environment of TCP/IP, and a communication network under a non-environment, setting Internet connectivity information to offer and the approach of receiving, and a user side's grasping the current setting data by the side of a user and inputting the information wishing updating The step which creates the data of user side information and is transmitted to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, The Internet configuration-file generation side arranges transmitted User Information to the Internet setup. The step transmitted to a provider side through the communication network under the non-environment of TCP/IP, or an environment, The step which a provider side generates a user account and a password at least, and transmits to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, or an environment, The step which the Internet configuration-file generation side creates the file for the Internet setup for updating, and transmits to a user side through the communication network under the non-environment of TCP/IP, Offer and the receipt correspondence procedure of the Internet connectivity information characterized by having the step in which the terminal by the side of a user downloads the Internet update file automatically, and installs it again.

[Claim 3] While choosing the provider of arbitration from two or more providers by whom a screen display was done and inputting User Information And create the data of the information on a user terminal and it transmits to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP. And the user terminal which downloads the transmitted file for the Internet setup automatically, User Information transmitted from this user terminal is arranged to the Internet setup. It transmits through the communication network under the non-environment of TCP/IP, or an environment. The Internet configuration-file generation equipment which creates the file for the Internet setup corresponding to a user environment, and is transmitted to said user terminal through the communication network under the non-environment of TCP/IP, A user account and a password are generated at least from said arranged User Information which

has been transmitted from this Internet configuration-file generation equipment. Offer and receipt communication system of the Internet connectivity information characterized by having Internet provider Web equipment transmitted to said Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment.

[Claim 4] While grasping the current setting data of a user terminal and inputting the information wishing updating The user terminal which creates the data of user-terminal information, transmits through the communication network under the non-environment of TCP/IP, and downloads the transmitted Internet update file automatically and installs it again, User Information transmitted from this user terminal is arranged to the Internet setup. It transmits through the communication network under the non-environment of TCP/IP, or an environment. The Internet configuration-file generation equipment which creates the file for the Internet setup for updating, and is transmitted to said user terminal through the communication network under the non-environment of TCP/IP, A user account and a password are generated at least from said arranged User Information which has been transmitted from this Internet configuration-file generation equipment. Offer and receipt communication system of the Internet connectivity information characterized by having Internet provider Web equipment transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment.

[Claim 5] Offer and receipt communication system of the Internet connectivity information according to claim 3 or 4 characterized by for the communication network under the non-environment of said TCP/IP being a public telephone network, and the communication network under the environment of TCP/IP being a communication network of digital immobilization or migration.

[Claim 6] Offer and receipt communication system of Internet connectivity information according to claim 3 or 4 with which said user terminal is characterized by being the table top type which carried the web browser at least or a notebook computer, a personal digital assistant, or a mobile computer and a portable telephone.

[Claim 7] While a user terminal chooses the provider of arbitration from two or more providers by whom a screen display was done and inputs User Information The processing which creates the data of user-terminal information and is transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, Internet configuration-file generation equipment arranges transmitted User Information to the Internet setup. The processing transmitted to Internet provider Web equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet provider Web equipment generates a user account and a password at least, and transmits to Internet configuration-file

generation equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet configuration-file generation equipment creates the file for the Internet setup corresponding to a user environment, and is transmitted to a user terminal through the communication network under the non-environment of TCP/IP, The information record medium characterized by storing a program for a computer performing processing whose user terminal downloads the file for the Internet setup to a user terminal automatically.

[Claim 8] While a user terminal grasps the current setting data of a self terminal and inputs the information wishing updating The processing which creates the data of user-terminal information and is transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, Internet configuration-file generation equipment arranges transmitted User Information to the Internet setup. The processing transmitted to Internet provider Web equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet provider Web equipment generates a user account and a password at least, and transmits to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet configuration-file generation equipment creates the file for the Internet setup for updating, and transmits to a user terminal through the communication network under the non-environment of TCP/IP, The information record medium characterized by storing a program for a computer performing control of the step in which a user terminal downloads the Internet update file automatically, and installs it again.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is TCP/IP (Transmission Control Protocol/Internet Protocol). The digital immobilization / mobil radio communication network under an environment, and the public telephone network under a non-environment are led. Internet configuration-file generation equipment, Internet Service Provider (ISP:Internet Service Provider) It is related with an information record medium at offer, the receipt correspondence procedure, and its communication system list of the Internet connectivity information which the Web equipment called a provider for short offers Internet connectivity information suitably, and a user terminal receives, and is downloaded automatically.

[0002]

[Description of the Prior Art] The communication network under the latest TCP/IP environment (for example, in intranet, the Internet, and an extra network (it writes only by the Internet suitably), the inexperienced personnel is also performing the electronic mail communication link and the Internet access (Internet surfing) to the computer.) Such an Internet access is digital one of its / analog wire net (ISDN/PSTN:Public Switched Telephone Network). The cross connection (for example, selection of the class of communication network and a selection setup of transmission speed) to a digital mobil radio communication network (PDC:Personal Digital Cellular Telecommunication System/PHS:Personal Handyphone System) is required.

[0003] Furthermore, various kinds of initial entry setup to the Internet Service Provider (ISP) which joins (the registration to initial setting, a modification setup, for example, the telephone number of access point, an IP address, and a distributed name management system (DNS:Domain Name System) is needed.)

[0004] Special fixed knowledge is required for this initial entry setup. In case a user terminal (a table top type / note type personal computer, the cellular-phone terminal and mobile computer that carried the web browser, portable telephone) is connected to the Internet, the input of the initial entry containing the technical term under a TCP/IP environment is indispensable, and follows difficulty on the input setup in a beginner. As this evasion measure, direct continuation of the user terminal is carried out to the Web server in ISP equipment (INTAWAKIINGU function (IWF) equipment), and service which a user terminal downloads a transfer of that configuration file, and is set as a user terminal (install) is carried out. For example, there is service which downloads setting information by the program installed in the setting information and the device of CD-ROM by which coincidence packing was carried out at the time of the purchase of a personal computer.

[0005] When choosing and using the provider for whom a user asks from two or more providers who offer different service (for example, the tariff and its connectable time amount for one month), in this service, it is necessary to connect with that provider's Web equipment and to download a configuration file. For that, it is necessary to prepare two or more communications protocols and control programs for connection for a user terminal. Moreover, it is necessary to carry the function for connection with each user terminal in a provider side. If it puts in another way, only the limited Internet Service Provider will offer the download service by the automatic transfer of this configuration file.

[0006] Moreover, since a user terminal did not carry the communications protocol or program which download the configuration file from all providers, either, only a specific provider's selection was possible for it.

[0007]

[Problem(s) to be Solved by the Invention] Thus, in the above-mentioned conventional example, initial setting of an initial entry with a provider and a modification setup are

troublesome, and the beginner had especially un-arranging [ that it was not quickly / easily and / installable in a connection setup based on the difficult technical term with difficulty ].

[0008] Moreover, it is receiving [ some providers may not be carrying out that service and / this service / depending on a user terminal ]-with service by the automatic download (install) by transfer of configuration file from ISPWeb equipment, \*\*\*\*\*.

[0009] Furthermore, since a user terminal did not carry the communications protocol or program which download the configuration file from all providers, either, un-arranging [ which is not made easily and quickly ] also had a desired provider's selection.

[0010] An information record medium solves the technical problem in such a Prior art in offer, the receipt correspondence procedure, and its communication system list of Internet connectivity information of this invention, and attains the following purpose in them.

(i) An information setup (initialization, modification setup) for enabling connection with all providers is automatically downloaded by the user terminal through Web equipment (install), and it enables it to set up a desired provider easily and quickly.

(ii) An information setup by the user terminal is performed automatically, aims at reduction of the connection impossible, and mitigates the support activity of the registration (initial setting and modification setup) by the provider.

[0011]

[Means for Solving the Problem] In order to attain the above-mentioned technical problem, the approach of this invention Have a communication network under the environment of TCP/IP, and a communication network under a non-environment, and Internet connectivity information is set to offer and the approach of receiving. While a user side chooses the provider of arbitration from two or more providers by whom a screen display was done and inputs User Information The step which creates the data of user side information and is transmitted to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, The Internet configuration-file generation side arranges transmitted User Information to the Internet setup. The step transmitted to a provider side through the communication network under the non-environment of TCP/IP, or an environment, The step which a provider side generates a user account and a password at least, and transmits to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, or an environment, The step which the Internet configuration-file generation side creates the file for the Internet setup corresponding to a user environment, and transmits to a user side through the communication network under the non-environment of TCP/IP, The user side has the step which downloads the file for the Internet setup to a terminal automatically.

[0012] The approach of this invention is equipped with the communication network under the environment of TCP/IP, and the communication network under a non-environment, and Internet connectivity information is set to offer and the approach of receiving. While a user

side grasps the current setting data by the side of a user and inputs the information wishing updating The step which creates the data of user side information and is transmitted to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, The Internet configuration-file generation side arranges transmitted User Information to the Internet setup. The step transmitted to a provider side through the communication network under the non-environment of TCP/IP, or an environment, The step which a provider side generates a user account and a password at least, and transmits to the Internet configuration-file generation side through the communication network under the non-environment of TCP/IP, or an environment, The step which the Internet configuration-file generation side creates the file for the Internet setup for updating, and transmits to a user side through the communication network under the non-environment of TCP/IP, It has the step in which the terminal by the side of a user downloads the Internet update file automatically, and installs it again.

[0013] Offer and receipt communication system of the Internet connectivity information on this invention While choosing the provider of arbitration from two or more providers by whom a screen display was done and inputting User Information Create the data of the information on a user terminal and it transmits to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP. And the user terminal which downloads the transmitted file for the Internet setup automatically, User Information transmitted from this user terminal is arranged to the Internet setup. It transmits through the communication network under the non-environment of TCP/IP, or an environment. The Internet configuration-file generation equipment which creates the file for the Internet setup corresponding to a user environment, and is transmitted to a user terminal through the communication network under the non-environment of TCP/IP, From arranged User Information which has been transmitted from this Internet configuration-file generation equipment, at least A user account, It is a configuration equipped with the Internet provider Web equipment which generates a password and is transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment.

[0014] Moreover, offer and receipt communication system of the Internet connectivity information on this invention While grasping the current setting data of a user terminal and inputting the information wishing updating The user terminal which creates the data of user-terminal information, transmits through the communication network under the non-environment of TCP/IP, and downloads the transmitted Internet update file automatically and installs it again, User Information transmitted from this user terminal is arranged to the Internet setup. It transmits through the communication network under the non-environment of TCP/IP, or an environment. The Internet configuration-file generation equipment which creates the file for the Internet setup for updating, and is transmitted to a

user terminal through the communication network under the non-environment of TCP/IP, A user account and a password are generated at least from arranged User Information which has been transmitted from this Internet configuration-file generation equipment. It is the configuration equipped with the Internet provider Web equipment transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment.

[0015] Moreover, the system of this invention is the configuration that are a public telephone network and the communication network under the environment of TCP/IP uses the communication network under the non-environment of said TCP/IP as the communication network of digital immobilization or migration, and is considered as the configuration which uses said user terminal as the table top type which carried the web browser at least or a notebook computer, a personal digital assistant, or a mobile computer and a portable telephone.

[0016] While a user terminal chooses the provider of arbitration from two or more providers by whom a screen display was done and inputs User Information, the information record medium of this invention And the processing which creates the data of user-terminal information and is transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, Internet configuration-file generation equipment arranges transmitted User Information to the Internet setup. The processing transmitted to Internet provider Web equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet provider Web equipment generates a user account and a password at least, and transmits to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet configuration-file generation equipment creates the file for the Internet setup corresponding to a user environment, and is transmitted to a user terminal through the communication network under the non-environment of TCP/IP, A program for a computer to perform processing whose user terminal downloads the file for the Internet setup to a user terminal automatically is stored.

[0017] Moreover, while a user terminal grasps the current setting data of a self terminal and, as for the information record medium of this invention, inputs the information wishing updating The processing which creates the data of user-terminal information and is transmitted to Internet configuration-file generation equipment through the communication network under the non-environment of TCP/IP, Internet configuration-file generation equipment arranges transmitted User Information to the Internet setup. The processing transmitted to Internet provider Web equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet provider Web equipment generates a user account and a password at least, and transmits to Internet

configuration-file generation equipment through the communication network under the non-environment of TCP/IP, or an environment, The processing which Internet configuration-file generation equipment creates the file for the Internet setup for updating, and transmits to a user terminal through the communication network under the non-environment of TCP/IP, A program for a computer to perform control of the step in which a user terminal downloads the Internet update file automatically, and installs it again is stored.

[0018] According to the approach and system of such this invention, it becomes as [ set / automatically / through a communication network (Web equipment) / an information setup for connection with a desired provider (initialization, modification setup) / by the user terminal / from many providers / easily and quickly ] (install by download). a setup of a desired provider's initial entry is easy also for a beginner, without needing special knowledge especially -- and it becomes possible quickly.

[0019] Moreover, in the approach and system of this invention, an information setup (initialization, modification setup) by the user terminal is performed automatically, and the error of a setup of the initial entry decreases. Namely, connection impossible decreases and the support activity of registration by the provider can be mitigated now.

[0020]

[Embodiment of the Invention] Next, the gestalt of operation of an information record medium is explained to offer, the receipt correspondence procedure, and its communication system list of Internet connectivity information of this invention with reference to a drawing at a detail. Drawing 1 is the block diagram showing the configuration in the operation gestalt of an information record medium in offer, the receipt correspondence procedure, and its communication system list of Internet connectivity information of this invention. In drawing 1 , the example of this operation gestalt shows the configuration of the Internet under the TCP/IP environment equipped with the communications protocol inverter which is not illustrated (a gateway unit or PHS contact).

[0021] In addition, the bottom of a TCP/IP environment is a standard communications protocol for "the bidirectional transfer (communication link)" in the Internet, the UNIX (trademark) workstation LAN, etc. here. As the architecture, it has each layer, such as application, transport, an internetwork, and network connection.

[0022] The example of this operation gestalt is equipped with the digital mobil radio communication networks 3, such as the digital point-to-point-communication networks 1, such as ISDN, and a PDC method, and a PHS method. Furthermore, it has the public telephone network 5 which are the existing digital one / analog telephone network (ISDN/PSTN).

[0023] Moreover, in the example of this operation gestalt, ISPWeb equipment 13 is connected between the digital point-to-point-communication network 1 and the public telephone

network 5.

[0024] Moreover, it has the portable telephone 16 between cel base station 3a of the digital mobil radio communication network 3.

[0025] Next, the configuration of Internet configuration-file generation equipment 10, a user terminal 12, and ISPWeb equipment 13 is explained to a detail. Drawing 2 is the block diagram showing the detailed example of a configuration of Internet configuration-file generation equipment 10. In drawing 2, Internet configuration-file generation equipment 10 is constituted by for example, the UNIX workstation. In this example of a configuration, it has the digital service unit ((terminal adopter TA) 10b for holding digital service unit (DSU) 10a and two or more terminals).

[0026] Moreover, it has this Internet configuration-file generation equipment 10 with 10d of interworking function (IWF) equipment which performs the sequence about Web server 10c which performs the control and processing for employing a website (homepage) on the Internet, and the TCP/IP connection on the digital point-to-point-communication network 1, database 10e for website (homepage) establishment, and router 10f for performing a link (line connection) etc.

[0027] Moreover, this Internet configuration-file generation equipment 10 10g of DNS servers, and database 10l. for distributed name management systems, The reception of an electronic mail, and E mail server 10h which performs the sequence of a transfer, The reception of Fax data (image data), and FAX (image) server 10i which performs the sequence of a transfer, It has SSL server 10j for encryption communications protocols (SSL:Secure Sockets Layer) which uses a monthly provider use tariff etc. in case tariff sanction (electronic commerce) is carried out with a credit card.

[0028] Moreover, 10m (NCU(Network Control Unit) 10k and modem (modem)) of contacts which process a line connection with a public telephone network 5 is formed in this Internet configuration-file generation equipment 10.

[0029] In addition, in this Internet configuration-file generation equipment 10, it is a sequence (for example, the LAN server which performs the CSMA/CD random access method by Ethernet (trademark) and RPC (each sequence of a RemoteProcedure Call remote call) may be prepared).

[0030] Drawing 3 is the block diagram showing other detailed examples of a configuration of the Internet configuration-file generation equipment 10 shown in drawing 2. Drawing 3 shows Internet configuration-file generation equipment 10A which is a simple example of a configuration, and the digital service unit (DSU10Aa, TA10Ab) is formed in this generation equipment 10A. Moreover, it has Web server 10Ad, IWF equipment 10Ac, database 10Ag, and router 10Af with contact (NCU and modem) 10Ac which processes a line connection with a public telephone network 5.

[0031] In addition, the configuration of such Internet configuration-file generation equipment

10 (10A) is an example, in addition it is common that a FTP (File Transfer Protocol) server etc. is prepared. Moreover, 10d (10Ae) of IWF equipment is functionally built into Web server 10c (10Ad), and it is constituted, or 10d (10Ac) of IWF equipment also has the case of a configuration of performing all the functions of the Internet configuration-file generation equipments 10 and 10A. Moreover, it may be arranged as external equipment router 10f (10Af).

[0032] Drawing 4 is the block diagram showing the example of a configuration of a user terminal 12, and drawing 5 is the block diagram showing the example of a configuration of small general purpose computer 12c in a user terminal 12. The user terminal 12 shown in drawing 4 shows the configuration (simple LAN) linked to the digital point-to-point-communication network 1 of ISDN, for example, is a configuration corresponding to 2B+D (information-channel 32kbpsx2, control channel 16kbps) transmission in ISDN.

[0033] A user terminal 12 has DSU12a and TA12b, and small general purpose computer 12c is connected to TA12b.

[0034] In addition, the user terminal 12 shown in drawing 4 may be built by LAN [ \*\*\*\* / comparatively on a large scale ] besides the general purpose computer of a stand-alone mold (simple substance configuration). This is the case where the operation gestalt of this invention is applied to the FDDI Local Area Network (LAN) currently built by the company.

[0035] Moreover, a user terminal 12 carries a web browser, respectively, and can realize same actuation with the application of the following explanation as it is also with the word processor which achieves the same function as a personal computer.

[0036] Small general purpose computer 12c of drawing 5 is a well-known fundamental configuration, and has interface (I/F circuit) 15c, CPU15d, ROM15e, working RAM15f, flash memory 15g, driver 15h for CD-ROM, the hard disk 15, and the I/O (I/O) circuit 15 in DSU15a and TA15b. Furthermore, the monitoring device 16, the keyboard 17, and the coordinate input unit 18 are connected to I/O circuit 15j.

[0037] ISPWeb equipment 13 is realizable with the same configuration as the Internet configuration-file generation equipment 10 shown in drawing 2 or drawing 3 , or 10A. Explanation of the configuration of having overlapped is \*\*\*\*(ed).

[0038] Drawing 6 is the block diagram showing the detailed example of a configuration of the portable telephones 14a and 16 in drawing 1 . Portable telephone 14a of drawing 6 and a portable telephone 16 are well-known fundamental configurations. Transceiver wireless section 20a, Modulation / recovery section 20b, time division multiple processing section 20c, and 20d of codec (coding and decryption) sections, 20h of wireless processing sections for judging a frequency change and received field strength to be CPU20g, It has interface (I/F) section 20i, 20f of arrival-of-the-mail display light emitting diodes and keyboard 20k, and 20l. of screen-display liquid crystal displays and 20m of arrival-of-the-mail display tremulor for

connecting with mobile computer 14b.

[0039] As a transmission system between the digital mobil radio communication networks 3, these portable telephones 14a and 16 may use any of a TDMA (PDC) method, a TDMA/TDD (PHS) method, and a CDMA method (IS-95/IMT-2000), and do not limit them especially. Moreover, especially modulation techniques (PSK method etc.) are not limited, either.

[0040] Moreover, mobile computer 14b connected to portable telephone 14a is the same configuration as fundamentally as the example of a configuration of the small general purpose computer shown in drawing 5, and the detailed configuration is omitted.

[0041] In addition, although considered as the PDC method or the PHS method, when there is much transmission amount of data, it is desirable [ the digital mobil radio communication network 3 ] to apply the PHS method in which broadband transmission with a quick data transfer rate and the Internet access by the PIAFS (PHS Internet Access Forum Standard) method are possible in the present condition.

[0042] Moreover, the general-purpose web browser which processes CGI (Common Gateway Interface) for performing external application by TCP/IP connection processing, FTP of a file transfer protocol and Web server10c, and 10Ad is carried in Internet configuration-file generation equipment 10, a user terminal 12 (portable telephone 14a, mobile computer 14b, and a portable telephone 16 are included), and ISPWeb equipment 13.

[0043] Moreover, Internet configuration-file generation equipment 10, a user terminal 12 (portable telephone 14a, mobile computer 14b, and a portable telephone 16 are included), and ISPWeb equipment 13 perform control by the program which CPU or CPU (not shown) of a Web server performs. This program is stored in an information record medium (for example, CD-ROM and semiconductor memory (ROM)), and is offered. Especially this program is needed when the function of the web browser carried in Internet configuration-file generation equipment 10, a user terminal 12, and ISPWeb equipment 13 is weak.

[0044] When using an analog telephone network (PSTN) to the digital point-to-point-communication network 1, it replaces with the above mentioned digital termination contact DSU and the above mentioned terminal adopter TA, and NCU and a modem are used.

[0045] Next, actuation of an operation gestalt is explained. In the Internet shown in drawing 1, the Internet communication link by TCP/IP connection is performed. Furthermore, Internet configuration-file generation equipment 10, a user terminal 12, ISPWeb equipment 13, portable telephone 14a, mobile computer 14b, and a portable telephone 16 perform a web browser, respectively, and it connects with access point or cel base station 3a, respectively, and they perform an exchange, Internet surfing, etc. of an electronic mail. In this case, in order to perform an exchange and Internet surfing of this electronic mail, explanation \*\*\*\* is carried out below beforehand.

[0046] In the Internet shown in drawing 1, the sequence is performed on a network with

various kinds of communications protocols or interfaces (for example, FTP or CGI). Furthermore, in the Internet shown in drawing 1, the text by HTML, voice, a still picture, or an animation is transmitted. This transmission is the object directions (the radio button by coordinate input devices, such as a mouse, support, screen directions actuation to a push button (or it is indicated as access.)) in HTTP. It performs by the common name and click actuation.

[0047] In addition, portable telephones 14a and 16 perform sequences, such as a FTP file transfer, through cel base station 3a and the wireless line connection (air interface) for example, by ARIB-27/28 specification.

[0048] Next, each actuation of the Internet configuration-file generation equipments 10 and 10A, a user terminal 12, and ISPWeb equipment 13 is explained. The Internet configuration-file generation equipments 10 and 10A shown in drawing 1 are employed by an Internet Service Provider, the service firm of dedication, etc. These Internet configuration-file generation equipments 10 and 10A receive the user-terminal information (for example, class [ of user terminal ], digital service unit (for example, DSU and NCU), used application software for communication link) condition about the provider selection information transmitted from the user terminal 12, the individual humanity news of the user who is needed for a contract with a provider, and a user terminal 12. And the Internet configuration-file generation equipments 10 and 10A transmit User Information which is needed for a contract with the provider who employs the ISPWeb equipment 13 chosen from this information through the digital point-to-point-communication network 1.

[0049] Moreover, the Internet configuration-file generation equipments 10 and 10A generate the Internet connectivity configuration file which a user terminal 12 needs based on the information for Internet connectivities transmitted through the digital point-to-point-communication network 1 from ISPWeb equipment 13, and the user-terminal information on a user terminal 12, and transmit it to a user terminal 12. A user terminal 12 downloads and sets up this Internet connectivity configuration file (install).

[0050] Each part of the Internet configuration-file generation equipment 10 shown in drawing 2 performs actuation, before performing an electronic mail communication link and the communication link about Internet surfing.

[0051] Internet configuration-file generation equipment 10A shown in drawing 3 also performs the same actuation as the Internet configuration-file generation equipment 10 shown in drawing 2.

[0052] The user terminal 12 shown in drawing 4 is in the condition that the setting information (for example, the telephone number of an access point, an IP address, a DNS server, etc.) for connecting with a provider is not set up. Moreover, a user terminal 12 displays the information for choosing a provider. Moreover, a user terminal 12 inputs the information which is needed in order that a user may contract with a provider, summarizes

such information and user-terminal information on a user terminal 12 to a file, and transmits them to Internet configuration-file generation equipment 10 through the digital point-to-point-communication network 1.

[0053] Each part of small general purpose computer 12c in the user terminal 12 shown in drawing 5 performs an electronic mail communication link and the communication link about Internet surfing by well-known actuation.

[0054] The ISPWeb equipment 13 shown in drawing 1 is employed by the provider, and carries out setup of the account of the individual humanity news of the user from Internet configuration-file generation equipment 10 for reception and users, registration of a password, etc. through the digital point-to-point-communication network 1. Moreover, the information for connecting with this account and provider is transmitted to Internet configuration-file generation equipment 10.

[0055] In drawing 6, portable telephones 14a and 16 perform telebrief by the digital mobil radio communication network 3, the TDMA (PDC) method or the TDMA/TDD (PHS) method, and the CDMA method (IS-95/IMT-2000), electronic mail communication link, and Internet surfing.

[0056] in such actuation, small general purpose computer 12c in the user terminal 12 of drawing 4 is sent to the telephone number (selection signal) of the access point (the exchange -- not shown) of a public telephone network 5, and accesses Internet configuration-file generation equipment 10. Moreover, portable telephones 14a and 16 are also sent to the telephone number (selection signal) of an access point (exchange) through cel base station 3a. That is, the sequence in future in TANETSU is performed by city accounting.

[0057] After this line connection performs the Internet communication link. That is, TCP/IP connection processing, processing which transmits HTML by HTTP, FTP file transfer protocol activation by the web browser, external application activation by CGI/Web server, etc. are performed.

[0058] In addition, such fundamental actuation is activation of the fundamental sequence in the Internet under the environment of TCP/IP connection, and is performed as it is also in the new transmission gestalt by the communications protocol (TCP/IP) by which a sequential escape is being carried out, and the extended web browser.

[0059] Next, actuation of the operation gestalt to which this invention corresponds is explained. In drawing 1, a user inputs the required information for performing selection, and provider and contract of a provider to the user terminal 12 linked to the Internet. This input and the user-terminal information on a user terminal 12 are transmitted to Internet configuration-file generation equipment 10 using a public telephone network 5. Internet configuration-file generation equipment 10 transmits the transmitted information to ISPWeb equipment 13 through the digital point-to-point-communication network 1.

[0060] ISPWeb equipment 13 returns setting information required for an Internet

connectivity to Internet configuration-file generation equipment 10 through the digital point-to-point-communication network 1 based on the transmitted information. Internet configuration-file generation equipment 10 creates the file for the Internet setup for the Internet connectivity adjusted in a user terminal 12 based on the information transmitted from ISPWeb equipment 13, and transmits it to a user terminal 12. The file for the Internet setup which the user terminal 12 received is downloaded (install).

[0061] Drawing 7 is the sequence and flow chart which show the procedure of an operation gestalt. Moreover, drawing 8 is drawing for explaining the example of a provider selection screen, and drawing 9 is drawing for explaining the example of an individual humanity news setting screen.

[0062] In addition, a transfer here is the transfer by the FTP file, or a bidirectional transfer by CGI (for example, when performing a transfer Kakuni sequence (ACK)).

[0063] Reference of drawing 1 and drawing 7 carries out a screen display of the information for choosing a provider by the user terminal 12 by a user's alter operation. Drawing 8 shows this example of a provider selection screen, and a screen display of "being its selection object until the 2500-/moon and 20 hours till the 3000-/moon, unlimitedness, the 1500-/moon, and 10 hours till the 2000-/moon and 15 hours till a provider name / providers (ISP) 1, 2, 3, and 4, the tariff information/2000-/moon in every five, and 20 hours" is carried out here. A user chooses from this selection screen the provider who wishes to contract, and inputs that information into a user terminal 12 (step S101).

[0064] Next, a user inputs the information which is needed for a provider contract based on the guidance by which a screen display is carried out to a user terminal 12 (S102). Drawing 9 shows this example of an individual humanity news setting screen, and a screen display of "a user name, the address, the telephone number, an approach to pay a tariff, and its check object" is carried out. Moreover, in a user terminal 12, user-terminal information required in order to access the Internet, such as a class of user terminal, a digital service unit (for example, DSU and NCU), and used application software for a communication link, is summarized (S103). Then, a user terminal 12 is connected to Internet configuration-file generation equipment 10 using a public telephone network 5 (S104).

[0065] In addition, a complicated setup of the Internet etc. is unnecessary, and is that it is suitable for automatic connection, and the line connection of 1 to 1, and a public telephone network 5 is used, because it can prevent effectively that contract information is revealed to a third person.

[0066] The provider selection information transmitted from the user terminal 12, information required for a provider contract, and information, such as used application software for a communication link, are inputted into Internet configuration-file generation equipment 10 (S105). The provider who becomes a candidate for a contract from this information is chosen. And it connects with selected ISPWeb equipment 13 through the digital

point-to-point-communication network 1. Then, Internet configuration-file generation equipment 10 transmits User Information which is needed for a contract with a provider to ISPWeb equipment 13.

[0067] With ISPWeb equipment 13, contract processing based on User Information received from Internet configuration-file generation equipment is performed, and a user account, a password, etc. are generated (S106). Moreover, information required for the Internet connectivity of a provider proper is summarized (S107), and such information is transmitted to Internet configuration-file generation equipment 10.

[0068] With Internet configuration-file generation equipment 10, the file for the Internet setup which is needed based on the user account transmitted by the provider, a password, information required for an Internet connectivity, and the device information on the user terminal 12 transmitted from the user terminal 12 is generated (S108). This information file is transmitted to a user terminal 12. In a user terminal 12, the file for the Internet setup transmitted from Internet configuration-file generation equipment 10 is received, and it downloads automatically (S109).

[0069] A user only inputs necessary minimum information by the above actuation, and even if there is no special knowledge, it becomes connectable with a desired provider automatically.

[0070] Next, other operation gestalten are explained. Drawing 10 is the sequence and flow chart which show the procedure corresponding to other operation gestalten. Other operation gestalten shown in drawing 10 have already completed the Internet connectivity in a user terminal 12, and a user changes the contents of a setting. First, in a user terminal 12, the present contents of a setting are grasped from the configuration file of an Internet connectivity (S401). (collection) A user inputs the contents wishing modification (correction) into a user terminal 12 (S402).

[0071] Next, a user terminal 12 summarizes information required in order to access the Internet, such as a contact for the class of user terminal, and an Internet connectivity, and a condition of S/W currently employed, (S403). Then, a user terminal 12 is connected to Internet configuration-file generation equipment 10 using a public telephone network 5 (S404).

[0072] With Internet configuration-file generation equipment 10, the provider selection information transmitted from the user terminal 12, information required for a provider contract, and the situation of a user terminal 12 are held (S405). A provider is chosen from this information and it connects with selected ISPWeb equipment 13 through the digital point-to-point-communication network 1. Then, Internet configuration-file generation equipment 10 transmits User Information to ISPWeb equipment 13.

[0073] With ISPWeb equipment 13, authentication processing is performed based on User Information received from Internet configuration-file generation equipment 10 (S406). Moreover, information required for the Internet connectivity of a provider proper is

summarized (S407), and such information is transmitted to Internet configuration-file generation equipment 10.

[0074] With Internet configuration-file generation equipment 10, the needed file for the Internet setup is generated based on the user account transmitted by the provider, a password, information required for an Internet connectivity and the user-terminal information on the user terminal 12 transmitted from the user terminal 12, and modification information (S408). This file for the Internet setup is transmitted to a user terminal 12.

[0075] In a user terminal 12, the Internet configuration file transmitted from Internet configuration-file generation equipment 10 is downloaded on reception and an automatic target (S409).

[0076] In addition, in this operation gestalt, portable telephone 14a, mobile computer 14b, and a portable telephone 16 are used as an object for migration to a user terminal 12, and are equipped with the function to perform activation for that of a user terminal 12 and this appearance. In this portable telephone 14a, mobile computer 14b, and a portable telephone 16, the contents which perform a screen display may differ from a user terminal 12, for example (for example, change setup of the total characters on screen in an I mode). (when restricting the number of alphabetic characters which carries out a screen display or setting up carrying out a screen display of those all etc.) That is, in portable telephone 14a, mobile computer 14b, and a portable telephone 16, different User Information from a user terminal 12 will be set up.

[0077] Moreover, although this operation gestalt explained to the digital point-to-point-communication network 1 with the example which held Internet configuration-file generation equipment 10 and ISPWeb equipment 13, it is also possible to hold both or one side of Internet configuration-file generation equipment 10 and ISPWeb equipment 13 in a public telephone network 5, and to perform said same actuation. moreover, the network configuration which unified Internet configuration-file generation equipment 10 and ISPWeb equipment 13 (a provider [ location / same ] -- \*\* -- alike -- arrangement) is sufficient.

[0078] In addition, with the above mentioned operation gestalt, performing an information setup for connection with an Internet Service Provider (initialization, modification setup) for pay, and collecting a monthly provider use tariff on the Internet is also considered. It is convenient if you perform credit sanction and debit card sanction through the Internet bank (net bank) installed on the digital point-to-point-communication network 1 in this case. In addition, in order to perform this sanction before an information setup, it is necessary to carry the program for performing that sanction in a user terminal 12 beforehand (for example, install by download).

[0079] The encryption communications protocol in this case needs to attain encryption advanced as an object for processing of banking (treatment of sanction, a money order, etc.) in

addition to the above mentioned general-purpose SSL.

[0080]

[Effect of the Invention] It has the effectiveness of becoming as [ set / automatically / through a communication network / an information setup for connection with a desired provider / according to the information record medium / as offer, the receipt correspondence procedure, and its communication system list of Internet connectivity information of this invention / by the user terminal / from many providers / it / easily and quickly ] so that clearly from the above explanation.

[0081] Moreover, according to this invention, an information setup by the user terminal is performed automatically, and the error of a setup of the initial entry decreases. That is, connection impossible decreases and it has the effectiveness that the support activity of registration by the provider can be mitigated now.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the configuration in the operation gestalt of an information record medium in offer, the receipt correspondence procedure, and its communication system list of Internet connectivity information of this invention.

[Drawing 2] It is the block diagram showing the detailed example of a configuration of the Internet configuration-file generation equipment in drawing 1 .

[Drawing 3] It is the block diagram showing the example of a configuration of an and also [ it is the detail of the Internet configuration-file generation equipment in drawing 1 ].

[Drawing 4] It is the block diagram showing the detailed example of a configuration of the user terminal in drawing 1 .

[Drawing 5] It is the block diagram showing the detailed example of a configuration of the small general purpose computer shown in drawing 4 .

[Drawing 6] It is the block diagram showing the detailed example of a configuration of the portable telephone in drawing 1 .

[Drawing 7] It is the sequence and flow chart which show the procedure of an operation gestalt.

[Drawing 8] It is drawing for explaining the example of a provider selection screen in an operation gestalt.

[Drawing 9] It is drawing for explaining the example of an individual humanity news setting screen in an operation gestalt.

[Drawing 10] It is the sequence and flow chart which show the procedure corresponding to

other operation gestalten.

**[Description of Notations]**

**1 Digital Point-to-Point Communication Network**

**3 Digital Mobil Radio Communication Network**

**5 Public Telephone Network**

**10 Internet Configuration-File Generation Equipment**

**12 User Terminal**

**13 ISPWeb Equipment**

**14a Portable telephone**

**14b Mobile computer**

**16 Portable Telephone**